

WHAT IS CLAIMED IS:

1. A nonwoven fabric material of short fibers comprising thermal-resistant synthetic fibers, wherein the short fibers are bound with an inorganic binder.
2. The nonwoven fabric material according to claim 1, wherein the short fibers are bound with the inorganic binder at the intersections.
3. The nonwoven fabric material according to claim 1, wherein the thermal-resistant synthetic fibers are at least one kind of fibers selected from the group consisting of poly(p-phenylene-2,6-benzobisoxazole) fibers, polybenzimidazole fibers, aramid fibers, polytetrafluoroethylene fibers, and poly(p-phenylene-2,6-benzobisthiazole) fibers.
4. The nonwoven fabric material according to claim 1, wherein the inorganic binder is a residue formed from either a solution of low melting point glass or a water-dispersible colloidal solution in which at least one of fibers of low melting point glass or particles of low melting point glass are dispersed.
5. The nonwoven fabric material according to claim 1, wherein the fibers are bound with a chemical covalent siloxane bonding.
6. The nonwoven fabric material according to claim 1, wherein the content of the inorganic binder ranges from 5 to 40 weight parts when the thermal-resistant synthetic fibers are 100 weight parts.
7. The nonwoven fabric material according to claim 1, wherein the fineness of the thermal-resistant synthetic fibers ranges from 0.25 to 4 denier.
8. The nonwoven fabric material according to claim 1, wherein the length of the thermal-resistant synthetic fibers ranges from 1 to 6mm.
9. The nonwoven fabric material according to claim 1, wherein the nonwoven fabric is obtained by a wet formation method.

10. The nonwoven fabric material according to claim 1, wherein the weight of the nonwoven fabric ranges from 20 to 100g/m².

11. The nonwoven fabric material according to claim 1, wherein the average thickness of the nonwoven fabric ranges from 0.03 to 0.2mm.

12. The nonwoven fabric material according to claim 1, wherein the nonwoven fabric material further comprises gaps for resin impregnation.

13. A prepreg of a short fiber nonwoven fabric comprising thermal-resistant synthetic fibers, the prepreg is manufactured by bonding the short fibers with an inorganic binder and further impregnating the nonwoven fabric with a resin varnish and drying.

14. The prepreg according to claim 13, wherein the resin varnish is at least one selected from the group consisting of an epoxy resin, a polyimide resin, a phenol resin, a fluorine resin and a cyanate ester resin.

15. The prepreg according to claim 13, wherein the short fibers are bound with the inorganic binder at the intersections.

16. The prepreg according to claim 13, wherein the thermal-resistant synthetic fibers are at least one kind of fibers selected from the group consisting of poly(p-phenylene-2,6-benzobisoxazole) fibers, polybenzimidazole fibers, aramid fibers, polytetrafluoroethylene fibers, and poly(p-phenylene-2,6-benzobisthiazole) fibers.

17. The prepreg according to claim 13, wherein the inorganic binder is a residue formed from either a solution of low melting point glass or a water-dispersible colloidal solution in which at least either fibers of low melting point glass or particles of low melting point glass are dispersed.

18. The prepreg according to claim 13, wherein the fibers are bound with a chemical covalent siloxane bonding.

19. The prepreg according to claim 13, wherein the content of the

inorganic binder ranges from 5 to 40 weight parts when the thermal-resistant synthetic fibers are 100 weight parts.

20. The prepreg according to claim 13, wherein the fineness of the thermal-resistant synthetic fibers ranges from 0.25 to 4 denier.

21. The prepreg according to claim 13, wherein the length of the thermal-resistant synthetic fibers ranges from 1 to 6mm.

22. The prepreg according to claim 13, wherein the nonwoven fabric is obtained by a wet formation method.

23. The prepreg according to claim 13, wherein the weight of the prepreg ranges from 40 to 200g/m².

24. The prepreg according to claim 13, wherein the average thickness of the prepreg ranges from 0.04 to 0.2mm.

25. A circuit board comprising a prepreg as an insulator, wherein the prepreg is prepared from a nonwoven fabric comprising short fibers bound with an inorganic binder, by impregnating the nonwoven fabric with a resin varnish and drying.

26. The circuit board according to claim 25, wherein the resin varnish is at least one selected from the group consisting of an epoxy resin, a polyimide resin, a phenol resin, a fluorine resin and a cyanate ester resin.

27. The circuit board according to claim 25, wherein the short fibers are bound with the inorganic binder at the intersections.

28. The circuit board according to claim 25, wherein the thermal resistant synthetic fibers are at least one kind of fibers selected from the group consisting of poly(p-phenylene-2,6-benzobisoxazole) fibers, polybenzimidazole fibers, aramid fibers, polytetrafluoroethylene fibers, and poly(p-phenylene-2,6-benzobisthiazole) fibers.

29. The circuit board according to claim 25, wherein the inorganic binder

is a residue formed from either a solution of low melting point glass or a water-dispersible colloidal solution in which at least either fibers of low melting point glass or particles of low melting point glass are dispersed.

30. The circuit board according to claim 25, wherein the fibers are bound with a chemical covalent siloxane bonding.

31. The circuit board according to claim 25, wherein the content of the inorganic binder ranges from 5 to 40 weight parts when the thermal-resistant synthetic fibers are 100 weight parts.

32. The circuit board according to claim 25, wherein the fineness of the thermal-resistant synthetic fibers ranges from 0.25 to 4 denier.

33. The circuit board according to claim 25, wherein the length of the thermal-resistant synthetic fibers ranges from 1 to 6mm.

34. The circuit board according to claim 25, wherein the nonwoven fabric is obtained by a wet formation method.

35. The circuit board according to claim 25, wherein the weight of the circuit board ranges from 45 to 400g/m².

36. The circuit board according to claim 25, wherein the average thickness of the circuit board ranges from 0.05 to 2mm.